

Table 2 Chemical and normative analyses of Challis Volcanics

Specimen numbers 1 E1798 2 E1800 3 E1805 4 E1806 5 156011 6 156012 7 156013 8 156014 9 156015 10 156016 11 156017 12 156018 13 156019 14 156020

Chemical analyses - analyses 1 through 4 by Fay Neuerburg; 5 through 14 by Paul L. D. Elmore, Samuel D. Botts, Ivan H. Barlow, and Gillison Cloe

SiO ₂	63.72	64.43	71.73	77.77	60.8	62.3	66.7	60.7	58.6	75.7	64.3	61.5	59.9	72.2
Al ₂ O ₃	15.98	16.85	14.79	11.46	16.5	14.8	14.6	15.2	15.8	12.6	16.7	14.9	18.0	13.9
Fe ₂ O ₃	1.94	1.99	.30	.85	2.2	2.9	3.8	4.2	3.1	1.0	2.3	4.6	2.6	.86
FeO	2.79	1.22	.38	.32	3.9	2.2	.59	2.0	3.2	.23	1.8	.58	2.6	.12
MgO	1.90	.82	.21	.21	3.1	3.5	1.1	2.7	2.0	.25	1.2	2.2	1.3	.30
CaO	2.66	3.27	.77	1.08	3.6	3.9	4.0	4.6	5.4	.28	3.2	4.2	4.7	1.6
Na ₂ O	3.71	4.20	2.32	3.15	3.8	3.4	3.2	3.6	2.9	1.6	3.3	3.3	3.6	3.1
K ₂ O	4.10	3.05	5.98	3.56	2.7	3.7	2.7	3.9	3.7	4.9	5.0	3.7	3.8	5.0
H ₂ O ⁻	.17	.40	1.31	.62										
H ₂ O ⁺	1.52	1.38	1.38	.62										
H ₂ O					2.5	2.3	2.2	1.7	1.9	3.0	1.1	2.8	1.4	1.5
TiO ₂	.73	.45	.39	.11	.64	.60	.72	.86	.91	.08	.72	.71	1.0	.64
P ₂ O ₅	.31	.22	.09	.07	.23	.20	.24	.42	.38	.02	.23	.42	.38	.16
MnO	.07	.07	.01	.05	.09	.10	.04	.08	.12	.02	.10	.10	.09	.03
CO ₂	.01	1.28	.02	.01	.06	.05	.05	.05	1.6	.05	.05	1.3	.57	.05
Total	99.61	99.63	99.68	99.88	100.12	99.95	99.94	100.01	99.61	99.73	100.00	100.31	99.94	99.46

CIPW norms (computed using U.S.G.S. rock norms computer program #9676)

q	17.806	24.403	34.254	43.745	14.796	15.879	28.473	13.562	17.603	46.989	17.927	20.538	14.526	31.919
or	24.364	18.163	35.923	21.194	15.936	21.875	15.965	23.044	21.950	29.034	29.546	21.797	22.469	29.707
ab	31.570	35.815	19.956	26.835	32.116	28.784	27.094	30.459	24.635	13.575	27.924	27.837	30.480	26.374
an	11.170	6.746	3.157	4.873	15.959	14.201	17.510	13.796	14.248	.945	15.056	9.844	17.241	6.612
c	1.367	4.219	3.418	.657	1.469				1.830	4.331	.708	1.842	1.651	.984
wO						1.475	.165	2.490						
en	4.759	2.058	.532	.527	7.711	8.721	2.741	6.724	5.001	.624	2.989	5.462	3.240	.751
fs	2.459				4.449	.840			2.044		.402		1.143	
mt	2.829	2.878	.129	.882	3.186	4.207		4.214	4.512	.576	3.335	.138	3.772	
hm		.020	.216	.248			3.802	1.293		.605		4.491		.865
il	1.394	.861	.753	.210	1.214	1.140	1.332	1.633	1.735	.152	1.367	1.344	1.900	.319
tn							.046							
ru														.475
ap	.738	.525	.217	.167	.544	.474	.569	.995	.904	.048	.545	.992	.901	.381
cc	.023	2.934	.046	.023	.136	.114	.114	.114	3.653	.114	.114	2.947	1.297	.114
Total	98.488	98.622	98.602	99.380	97.516	97.710	97.812	98.323	98.114	96.993	98.913	97.232	98.620	98.501

Locations of specimens

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|-------|--|--------|---|--------|---|
| E1798 | Mouth of Garfield Canyon | 156011 | In Copper Basin mine | 156017 | 2500 feet S66W of Golden Chariot mine |
| E1800 | 20,300 feet N29E of junction of Little Boone Creek and East Fork Big Lost River | 156012 | Hill top west edge unsurveyed section 18, T.5N, R.23E. | 156018 | 3,000 feet N83W of southeast corner unsurveyed section 36, T.3N, R.22E. |
| E1805 | Hill top 11,000 feet N6E of junction of Star Hope Creek and East Fork Big Lost River | 156013 | 1500 feet west of southwest corner of unsurveyed section 15, T.5N, R.23E. | 156019 | Northwest 1/4 unsurveyed section 2, T.3N, R.22E |
| E1806 | About 2500 feet northeast of Leadbelt mine | 156014 | Near mouth of Stoddard Gulch | 156020 | 3,200 feet S61E of northeast corner unsurveyed section 20, T.7N, R.22E. |
| | | 156015 | In bight of Dry Fork Creek | | |
| | | 156016 | Center of west edge of section 22, T.3N, R.23E | | |